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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,347	07/05/2001	Naveen Dhar	SPECT-01046US0 DEL	5134
38284	7590	01/26/2005	EXAMINER	
RYDER IP LAW, PC			VARTANIAN, HARRY	
DOUGLAS J. RYDER			ART UNIT	PAPER NUMBER
3669 CONCORD ROAD				
DOYLESTOWN, PA 18901			2634	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/899,347	DHAR ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Harry Vartanian	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 7/5/2001.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-3,8-11,14,15 and 24-32 is/are rejected.
- 7) Claim(s) 4-7,12,13 and 16-23 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 July 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

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## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **63-64 and 115**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. ***Please double check correspondence between item numbers in figure 4 and the specification.***

### ***Claim Objections***

1. Claims 3, 8-9 are objected to because of the following informalities:

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In Claim 3, line 3 the phrase "said zone managers" lacks antecedent basis. Please change to "said discrete zone managers".

In Claim 8, line 3 the phrase "said zone managers" lacks antecedent basis. Please change to "said discrete zone managers".

Claim 9 is objected to for being dependent on an objected base claim.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8-9, 14-15, 27-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "said multiple mobile stations" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "said zone managers" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "said zone managers" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 27 recites the limitation "said collision prediction" in line 1. There is insufficient antecedent basis for this limitation in the claim.

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Claim 28 recites the limitation "said prediction period" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 29 recites the limitation "said prediction period" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "said collision prediction" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "said collision prediction" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 32 recites the limitation "said collision prediction" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 is rejected for being dependent on a rejected base claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 10, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Beasley et al (USPGPUB 20040246929). Beasley et al discloses a collision and interference avoidance system for a frequency hopping wireless system. Please note that although

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Beasley et al has an effective US filing date after the parent case(09/750592), the collision detection system claimed is new matter in the CIP therefor being exempt from the benefit of the earlier filing date. Regarding Claim 1, Beasley et al meets the following limitations of the claim:

hopping control means for indicating frequency hopping sequences for said downlink signals and said uplink signals, **fig 3, item 302**

zone manager means including,

hopping extraction means for extracting frequency hopping information from said hopping control means, **fig 3**

collision prediction means forming predictions of radio channel interference between dedicated channels, **para 19**

switching control means responsive to said predictions for dynamic switching of said dedicated channels so as to avoid said interference. **para 19**

The use of a base station with "a plurality of transceiver stations" in a frequency hopping system is admitted prior art by the applicant in Para 0010 of the published application.

More specifically, in Para 19 Beasley et al states that imminent collisions are *anticipated* before transmission and in response a change in transmit frequency occurs to "avoid mutual interference".

Regarding Claim 3, Beasley et al shows in Fig 3, Item 312 that once a collision is anticipated other systems are notified in order to "change transmission sequence" and avoid future collisions of packets.

Regarding Claims 10 and 11, Beasley et al meets the following limitations of the claim:

said collision prediction means tracks hopping frequencies for multiple mobile stations and said radio channel interference is cochannel interference. **Abstract**

said collision prediction means tracks hopping frequencies for multiple mobile stations and said radio channel interference is adjacent channel interference. **Abstract**

4. Claims 24, 26, 31-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Souissi et al(US PGPUB 2002/0075941). Regarding Claim 24, Souisse et al describes a

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frequency hopping computer system wherein frequencies are switched or hopping sequences changed whenever interference or collisions are anticipated(Para 0039). The following limitations of Claim 24 are met:

indicating frequency hopping sequences for said downlink signals and said uplink signals **Abstract**  
managing fast macrodiversity switching and frequency hopping including,  
extracting frequency hopping information from said frequency hopping sequences, **Abstract**  
forming predictions of radio channel interference between dedicated channels, **Para 039**  
dynamic switching of said dedicated channels so as to avoid said interference. **Para 039**

The use of a base station with "a plurality of transceiver stations" in a frequency hopping system is admitted prior art by the applicant in Para 0010 of the published application.

Regarding Claim 26, Sousse et al meets the following limitations of the claim:

said managing step transmits frequency hopping information among discrete zone managers. **Abstract**

Regarding Claims 31 and 32, Sousse et al meets the following limitations of the claim:

said collision prediction tracks hopping frequencies for multiple mobile stations and said radio channel interference is cochannel interference. **Para 0062**

said collision prediction tracks hopping frequencies for multiple mobile stations and said radio channel interference is adjacent channel interference. **Para 009**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al (USPGPUB 20040246929). Beasley et al does not expressly disclose having a database to store frequency hopping information. However, the use of a database storing means is a design choice.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a database or other storing means to hold hopping information. Applicant has not disclosed that storing the hopping sequences in a database provides an advantage, is used for a particular purpose, or solves a stated problem. Therefore, it would have been obvious to one of ordinary skill in this art to modify Beasley et al to obtain the invention as specified in Claim 2.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Souissi et al(US PGPUB 2002/0075941). Beasley et al does not expressly disclose having to store frequency hopping information. However, storing frequency hopping information is a design choice.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a database or other storing means to hold hopping information. Applicant has not disclosed that storing the hopping sequences provides an advantage, is used for a particular purpose, or solves a stated problem. Therefore, it would

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have been obvious to one of ordinary skill in this art to modify Souissi et al(US PGPUB 2002/0075941) to obtain the invention as specified in Claim 2.

***Allowable Subject Matter***

7. Claims 4-7, 12-13, 16-20, 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Vartanian whose telephone number is 571.272.3048. The examiner can normally be reached on 10:00-6:30 Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571.272.3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harry Vartanian  
Examiner  
Art Unit 2634

HV

  
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